XT Family of Contactors

Contents

Contactors and Starters

Product Description

The Eaton ***XT*** contactors and starters includes non-reversing and reversing contactors, overload relays and a variety of related accessories. Because ***XT*** meets IEC, UL®, CSA® and CE standards, it is the perfect product solution for IEC applications all over the world. The compact, space saving and easy to install ***XT*** line of IEC contactors and starters is the efficient and effective solution for customer applications from 7A to 2450A.

Application Description

The ***XT*** line of IEC power control was engineered to provide highly effective control and protection for a variety of loads, including motors, compressors, pumps, resistive, capacitor banks, isolation, and others. ***XT*** also includes IEC ratings for lighting applications as well.

XT contactors can be used in safety applications according to EN 954-1, EN ISO 13849-1 and IEC 62061 up to Category 4, PI e and SIL 3. Information concerning safety related characteristics (B10 and B10d values) is available online. The auxiliary contact modules and built-in auxiliary contacts meet IEC EN 60947-5-1 Annex L (positively driven) and IEC EN 60947-4-1 Annex F (mirror contacts).

Features and Benefits

- AC control from 12V to 600V 50/60 Hz
- DC control from 12V to 220V
- Available with screw or spring cage terminals
- Reversing or non-reversing contactors and starters
- AC-3 contactor ratings to 1000A and AC-1 contactor ratings to 2000A
- Non-reversing starters to 650A
- Panel or DIN rail mounting to 65A
- IP20 finger and back-of-hand proof
- Large ambient temperature range, –25 to 50°C [–13 to 122°F]
- AC and DC controlled contactors in the same compact frame
- Low power consumption AC and DC coils
- Built-in NO or NC auxiliary contacts to 32A
- Plug-in accessories for reduced installation time
- Coil replacement on Frames C–N (18–820A)
- Contact replacement on Frames D–N (40 –820A)
- Integrated suppressor 7–150A DC operated contactors and 185–2000A AC and DC operated contactors

Standards and Certifications

- IEC EN 60947
- CE approved
- UL
- CSA
- ATEX
- RoHS

Reference

Refer to **Volume 10—Enclosed Control**, CA08100012E, Tab 3, section 3.1 for additional product information on IEC Non-Metallic Enclosed Contactors and Starters.

Note: For Type 2 Coordination, see **Page V5-T1-232**.

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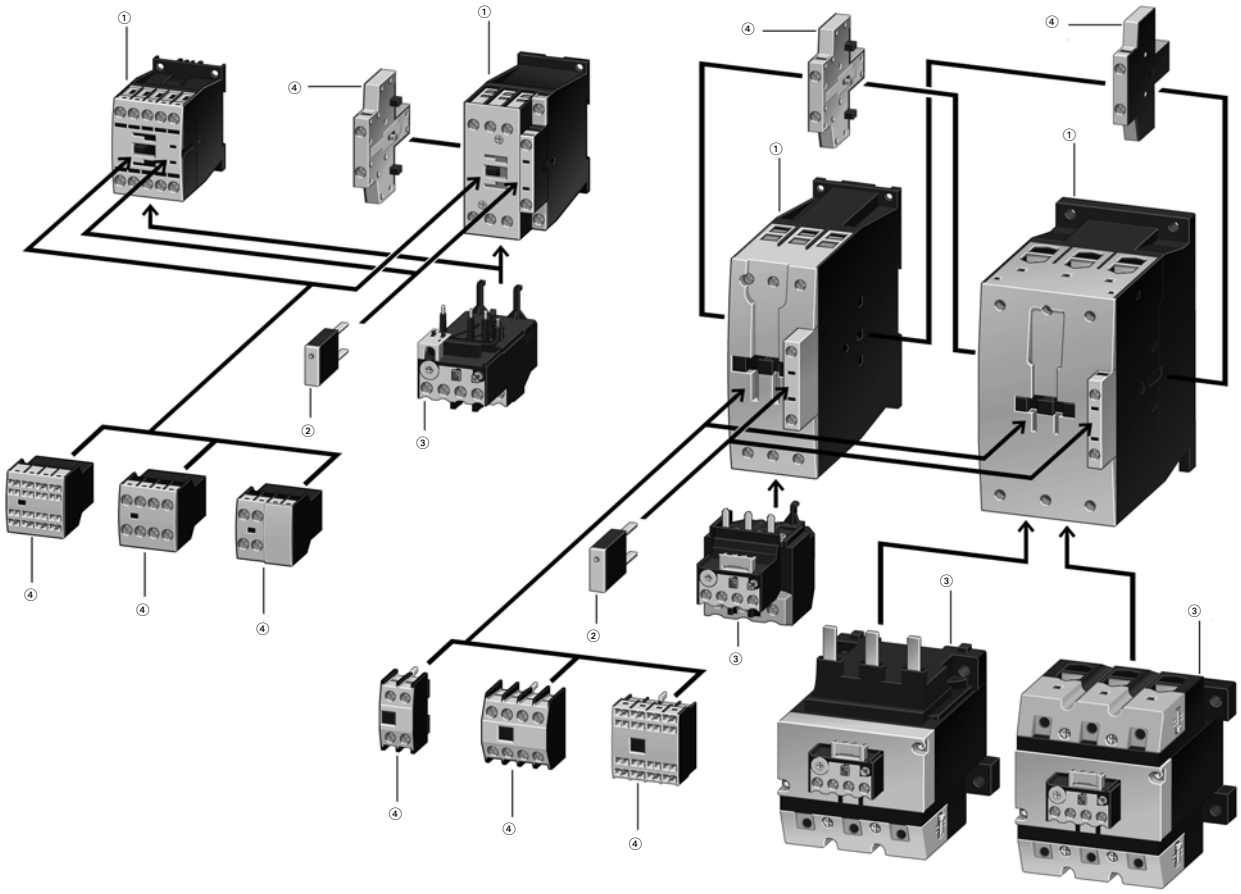
Product Identification

XTCE007B to XTCE170G (7 to 170A) Contactors



Notes

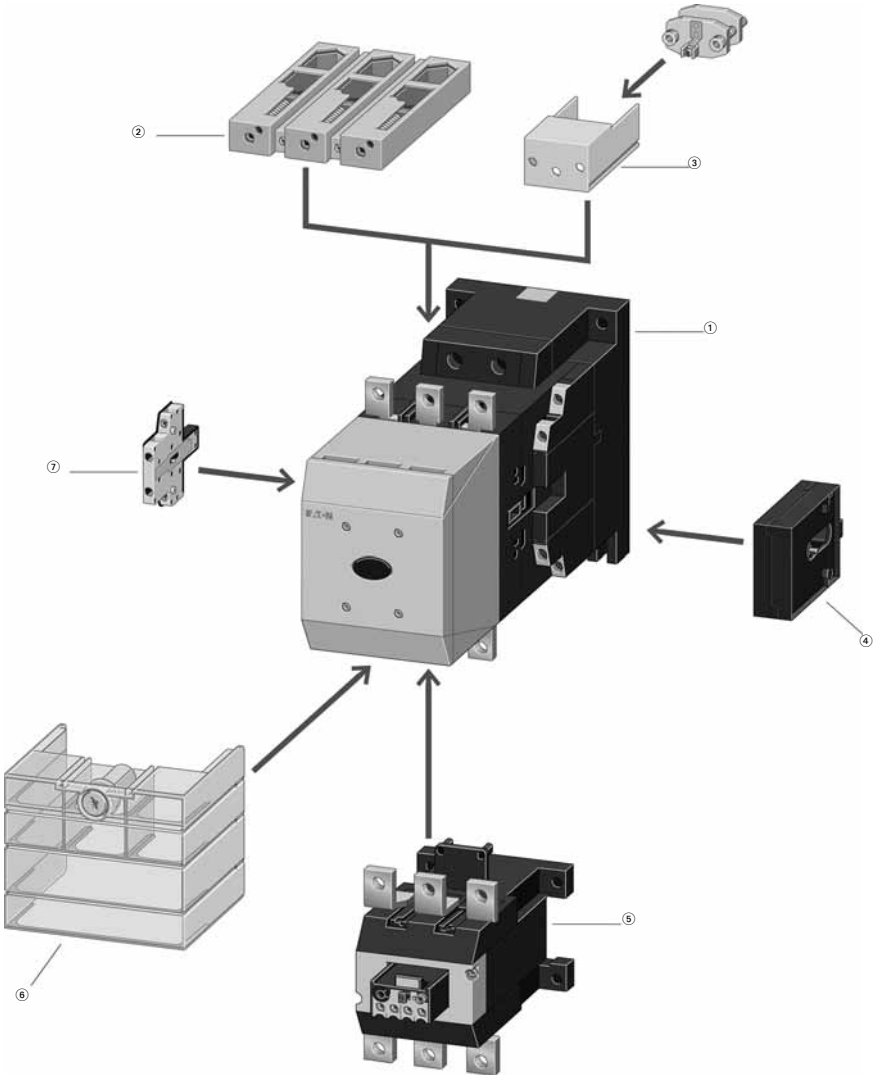
① **Contactor up to 170A AC-3** (see **Page V5-T1-39**)
AC: 12–600V, 50, 60, 50/60 Hz
0.8–1.1 x U_c)
DC: 12–250V
XTCE…B_ (7–15A): 0.8–1.1 x U_c
XTCE…C_–XTCE…G_(18–150A): 0.7–1.2 x U_c
24V: 0.7–1.3 x U_c at 40°C without additional auxiliary contacts
Coils for special voltages
"Safe Isolation" to IEC 536 between coil and contacts

② **Suppressors** (see **Page V5-T1-71**)
RC suppressor
Varistor suppressor
Free-wheel diode suppressor

③ **Overload Relays** (see **Page V5-T1-130**)
Can be mounted directly
Separate mounting, possible
Protection of EEx e-motors

④ **Auxiliary Contact Modules** (see **Page V5-T1-24**)
Two-pole, plug-in type
Four-pole, plug-in type
Overlapping contacts
Two-pole, side-mounting

XTCE185–XTCE20 Contactors



Notes

① **XTCE Contactors for 185–2000A**
(see **Page V5-T1-46**)
Multi-voltage coils:
24–48 Vdc
48–110 Vac/Vdc
110–250 Vac/Vdc
250–500 Vac
0.7–1.15 x U_c
Actuation options:
Directly
From the PLC
With low-consumption contact
XTCS Contactors for 185–570A AC-3
(see **Page V5-T1-42**)
Control voltages:
110–120V 50/60 Hz
220–240V 50/60 Hz
Conventional operation

② **Cable Terminal Block**
(see **Page V5-T1-97**)
One or two conductors per phase
Round and flat conductor connectable
Finger-proof

③ **Flat Strip Conductor Terminals**
(see **Page V5-T1-97**)
One or two strips per phase
Control circuit terminal
Cover for fingerproofing

④ **Mechanical Interlock**
(see **Page V5-T1-73**)
Fits between contactors

⑤ **Overload Relays**
(see **Page V5-T1-130**)
Can be mounted directly
Separate mounting, possible
Protection of EEx e-motors
PTB certificate

⑥ **Terminal Shroud**
(see **Page V5-T1-75**)
Finger-proof

⑦ **Auxiliary Contact Modules**
(see **Page V5-T1-24**)
Two-pole, side-mounting

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Catalog Number Selection

XT IEC Contactors and Starters

XT CE C 007 B 01 AD P16

Designation
XT = ***XT*** line of IEC control

Type
CE = Three-pole FVNR IEC contactor
CS = Three-pole FVNR S Series IEC contactor
CF = Four-pole FVNR IEC contactor
CR = Three-pole FVR IEC contactor
CC = IEC capacitor contactor
AE = FVNR IEC starter
AS = FVNR S-Series IEC starter
AR = FVR IEC starter

Terminations
Blank = Screw terminals (6–65A); 5 mm (80–150A); no lugs (185–2000A)
C = Spring cage terminals consult local sales office for availability

Coil Codes
See **Page V5-T1-53**.

Built-In Auxiliary Contact
01 = 1NC
10 = 1NO
00 = 0NO–0NC
S1 = 1NO–1NC side-mount auxiliary
11 = 1NO–1NC top-mount auxiliary
22 = 2NO–2NC

Current Ratings, AC-3		
007 = 7A	**080** = 80A	**570** = 570A
009 = 9A	**095** = 95A	**580** = 580A
012 = 12A	**115**= 115A	**650** = 650A
015 = 15A	**150** = 150A	**750** = 750A
018 = 18A	**170** = 170A	**820** = 820A
025 = 25A	**185** = 185A	**C10** = 1000A
032 = 32A	**225** = 225A	**C14** = 1400A, AC-1
040 = 40A	**250** = 250A	**C16** = 1600A, AC-3
050 = 50A	**300** = 300A	**C20** = 2000A, AC-1
065 = 65A	**400** = 400A	
072 = 72A	**500** = 500A	

Frame Size Designation	
B = 45 mm	**L** = 140 mm
C = 45 mm	**M** = 160 mm
D = 55 mm	**N** = 250 mm
F = 90 mm	**P** = 260 mm
G = 90 mm	**R** = 515 mm
H = 140 mm	

XTAE, XTAS and XTAR Starters Only—Maximum Overload Relay

XTOB Maximum Overload Rating

Frame B	**Frame D**
P16 = 0.1–0.16A	**010** = 6–10A
P24 = 0.16–0.24A	**016** = 10–16A
P40 = 0.24–0.4A	**024** = 16–24A
P60 = 0.4–0.6A	**040** = 24–40A
001 = 0.6–1A	**057** = 40–57A
1P6 = 1.0–1.6A	**065** = 50–65A
2P4 = 1.6–2.4A	**075** = 65–75A
004 = 2.4–4A	
006 = 4–6A	**Frame F**
010 = 6–10A	**035** = 25–35A
012 = 9–12A	**050** = 35–50A
016 = 12–16A	**070** = 50–70A
	100 = 70–100A
Frame C	**Frame G**
P16 = 0.1–0.16A	**035** = 25–35A
P24 = 0.16–0.24A	**050** = 35–50A
P40 = 0.24–0.4A	**070** = 50–70A
P60 = 0.4–0.6A	**100** = 70–100A
001 = 0.6–1A	**125** = 95–125A
1P6 = 1.0–1.6A	**150** = 120–150A
2P4 = 1.6–2.4A	**175** = 145–175A
004 = 2.4–4A	
006 = 4–6A	**Frame L**
010 = 6–10A	**070** = 50–70A
016 = 10–16A	**100** = 70–100A
024 = 16–24A	**125** = 95–125A
032 = 24–32A	**160** = 120–160A
	220 = 160–220A
	250 = 200–250A

XTOE Maximum Overload Rating

	Standard Type Suffix	Ground Fault Type Suffix
Frame B		
0.33–1.65A	5E1P6	5G1P6
1–5A	5E005	5G005
4–20A	5E020	5G020
Frame C		
0.33–1.65A	5E1P6	5G1P6
1–5A	5E005	5G005
4–20A	5E020	5G020
9–45A	5E045	5G045
Frame D		
9–45A	5E045	5G045
20–100A	5E100	5G100
Frame F, G		
20–100A	5E100	5G100
Frame G, H		
35–175A	5E175	5G175

Frame H

Three-Pole Contactors, Frame H (Electronic Coil)—UL/CSA Ratings

UL General Purpose Ampere Rating	Three-Phase hp Ratings 200V	240V	480V	600V	Auxiliary Contacts	Catalog Number ①②
250	50	60	125	150	2NO-2NC	**XTCE185H22_**
250	60	75	150	200	2NO-2NC	**XTCE225H22_**

Three-Pole Contactors, Frame H (Electronic Coil)—IEC Ratings

AC-3 I_e (A)	AC-1 (40°C) $I_e = I_{th}$ (A)	Maximum kW Ratings AC-3/Three-Phase Motors 50–60 Hz 220/230V	380/400V	660/690V ③	1000V ③	Auxiliary Contacts	Catalog Number ①②
185	337	55	90	140	108	2NO-2NC	**XTCE185H22_**
225	386	70	110	215	108	2NO-2NC	**XTCE225H22_**

Frame L

Three-Pole Contactors, Frame L—UL/CSA Ratings

UL General Purpose Ampere Rating	Three-Phase hp Ratings 200V	230V	460V	575V	Auxiliary Contacts	Catalog Number ①②
Standard Coil (110/120V, 230/240 Vac Coil Only)						
300	75	100	200	250	2NO-2NC	**XTCS250L22_**
350	100	125	250	300	2NO-2NC	**XTCS300L22_**
Electronic Coil						
300	75	100	200	250	2NO-2NC	**XTCE250L22_**
350	100	125	250	300	2NO-2NC	**XTCE300L22_**

Three-Pole Contactors, Frame L—IEC Ratings

AC-3 I_e (A)	AC-1 (40°C) $I_e = I_{th}$ (A)	Maximum kW Ratings AC-3/Three-Phase Motors 50–60 Hz 220/230V	380/400V	660/690V ③	1000V ③	Auxiliary Contacts	Catalog Number ①②
Standard Coil (110/120V, 230/240 Vac Coil Only)							
250	429	75	132	240	108	2NO-2NC	**XTCS250L22_**
300	490	90	160	195	132	2NO-2NC	**XTCS300L22_**
Electronic Coil							
250	429	75	132	240	108	2NO-2NC	**XTCE250L22_**
300	490	90	160	195	132	2NO-2NC	**XTCE300L22_**

Notes

① Underscore (_) indicates magnet coil suffix required. See **Page V5-T1-53**. Terminals not included. See **Page V5-T1-75** for terminal accessories.

② Does not include lugs.

③ For 185–500A contactors at 660/690V or 1000V: Do not reverse directly.

Starter Application Data ①

Catalog Prefix	AC-3	Electrical Life (Operations)
XTAE012B	12A	1 million
XTAE015B	15A	1.2 million
XTAE018C	18A	2 million

Magnet Coil Suffix

Coil Voltage	Suffix Code
Frames A–B	
110V 50 Hz, 120V 60 Hz	**A**
220V 50 Hz, 240V 60 Hz	**B**
230V 50 Hz	**F**
24V 50/60 Hz	**T**
24 Vdc	**TD**
415V 50 Hz, 480V 60 Hz	**C**
600V 60 Hz	**D**
208V 60 Hz	**E**
190V 50 Hz, 220V 60 Hz	**G**
240V 50 Hz, 277V 60 Hz	**H**
380V 50 Hz, 440V 60 Hz	**L**
400V 50 Hz	**N**
380V 60 Hz	**P**
12V 50/60 Hz	**R**
42V 50 Hz, 48V 60 Hz	**W**
48V 50 Hz	**Y**
120 Vdc	**AD**
220 Vdc	**BD**
12 Vdc	**RD**
48 Vdc	**WD**

Coil Voltage	Suffix Code
Frames C–F	
110V 50 Hz, 120V 60 Hz	**A**
220V 50 Hz, 240V 60 Hz	**B**
230V 50 Hz	**F**
24V 50/60 Hz	**T**
24–27 Vdc	**TD**
415V 50 Hz, 480V 60 Hz	**C**
600V 60 Hz	**D**
208V 60 Hz	**E**
190V 50 Hz, 220V 60 Hz	**G**
240V 50 Hz, 277V 60 Hz	**H**
380V 50 Hz, 440V 60 Hz	**L**
400V 50 Hz	**N**
380V 60 Hz	**P**
12V 50/60 Hz	**R**
42V 50 Hz, 48V 60 Hz	**W**
48V 50 Hz	**Y**
110–130 Vdc	**AD**
200–240 Vdc	**BD**
48–60 Vdc	**WD**

Coil Voltage	Suffix Code
Frame G	
100–120V 50/60 Hz	**A**
190–240V 50/60 Hz	**B**
24V 50/60 Hz	**T**
24–27 Vdc	**TD**
480–500V 50/60 Hz	**C**
380–440V 50/60 Hz	**L**
42–48V 50/60 Hz	**W**
110–130 Vdc	**AD**
200–240 Vdc	**BD**
48–60 Vdc	**WD**
Frame H	
100–120V 50/60 Hz	**A**
190–240V 50/60 Hz	**B**
480–500V 50/60 Hz	**C**
380–440V 50/60 Hz	**L**
24V 50/60Hz	**T**
42–48V 50/60Hz	**W**
110–130 Vdc	**AD**
200–240 Vdc	**BD**
24–27 Vdc	**TD**
48–60 Vdc	**WD**

Coil Voltage	Suffix Code
Frames L–N	
110–250 Vdc 40–60 Hz	**A**
250–500V 40–60 Hz	**C**
48–110 Vdc 40–60 Hz	**Y**
24–48 Vdc	**TD** ②
Frames L–M, S-Series	
110–120V 50/60 Hz	**A**
220–240V 50/60 Hz	**B**
Frames P–R	
230–250 Vdc 50–60 Hz	**B**

Notes

① See **Page V5-T1-111** for electrical life curves.

② Frames L–M only.

XT Family of Contactors

Contents

Contactors and Starters

Product Description

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XT contactors can be used in safety applications according to EN 954-1, EN ISO 13849-1 and IEC 62061 up to Category 4, PI e and SIL 3. Information concerning safety related characteristics (B10 and B10d values) is available online. The auxiliary contact modules and built-in auxiliary contacts meet IEC EN 60947-5-1 Annex L (positively driven) and IEC EN 60947-4-1 Annex F (mirror contacts).

Features and Benefits

- AC control from 12V to 600V 50/60 Hz
- DC control from 12V to 220V
- Available with screw or spring cage terminals
- Reversing or non-reversing contactors and starters
- AC-3 contactor ratings to 1000A and AC-1 contactor ratings to 2000A
- Non-reversing starters to 650A
- Panel or DIN rail mounting to 65A
- IP20 finger and back-of-hand proof
- Large ambient temperature range, –25 to 50°C [–13 to 122°F]
- AC and DC controlled contactors in the same compact frame
- Low power consumption AC and DC coils
- Built-in NO or NC auxiliary contacts to 32A
- Plug-in accessories for reduced installation time
- Coil replacement on Frames C–N (18–820A)
- Contact replacement on Frames D–N (40 –820A)
- Integrated suppressor 7–150A DC operated contactors and 185–2000A AC and DC operated contactors

Standards and Certifications

- IEC EN 60947
- CE approved
- UL
- CSA
- ATEX
- RoHS

Reference

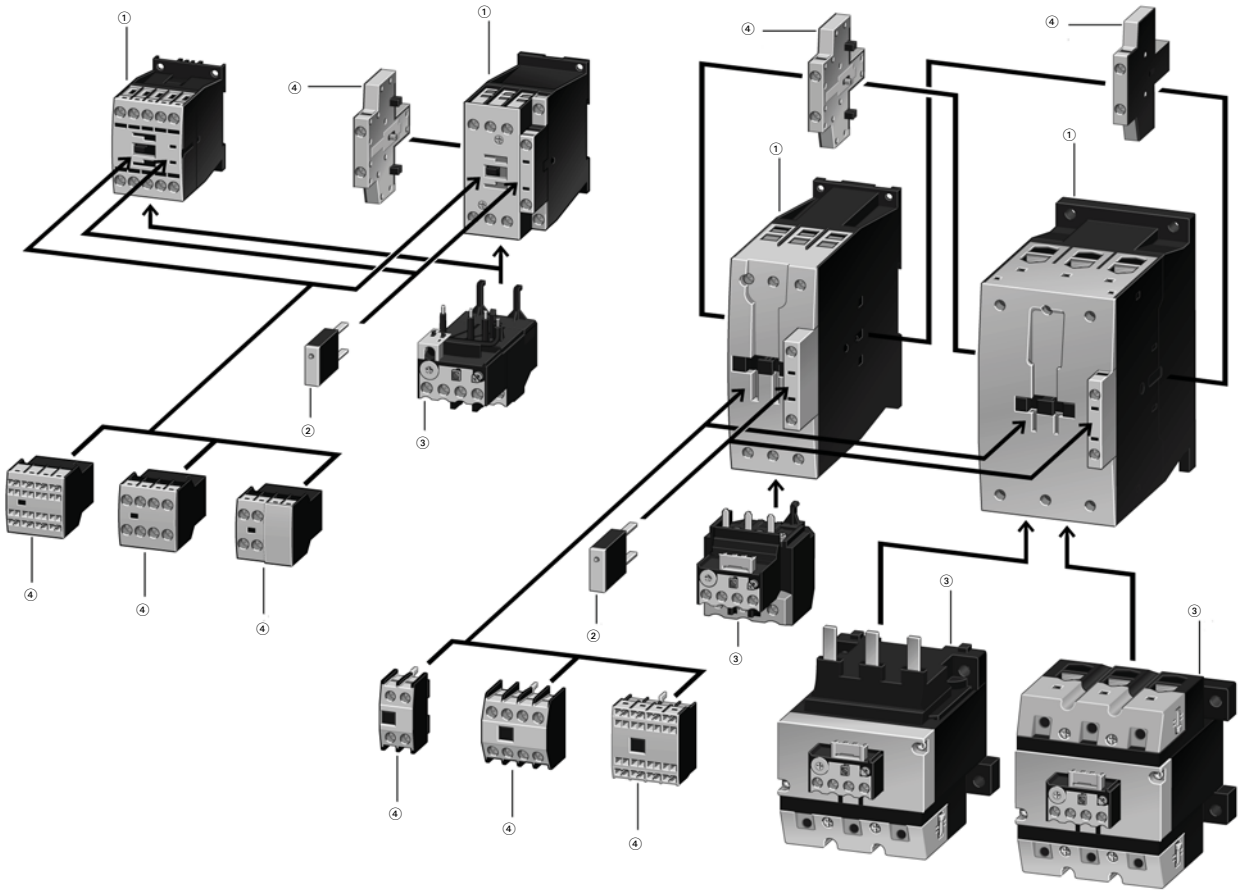
Refer to **Volume 10—Enclosed Control**, CA08100012E, Tab 3, section 3.1 for additional product information on IEC Non-Metallic Enclosed Contactors and Starters.

Note: For Type 2 Coordination, see **Page V5-T1-232**.

1

Product Identification

XTCE007B to XTCE170G (7 to 170A) Contactors



Notes

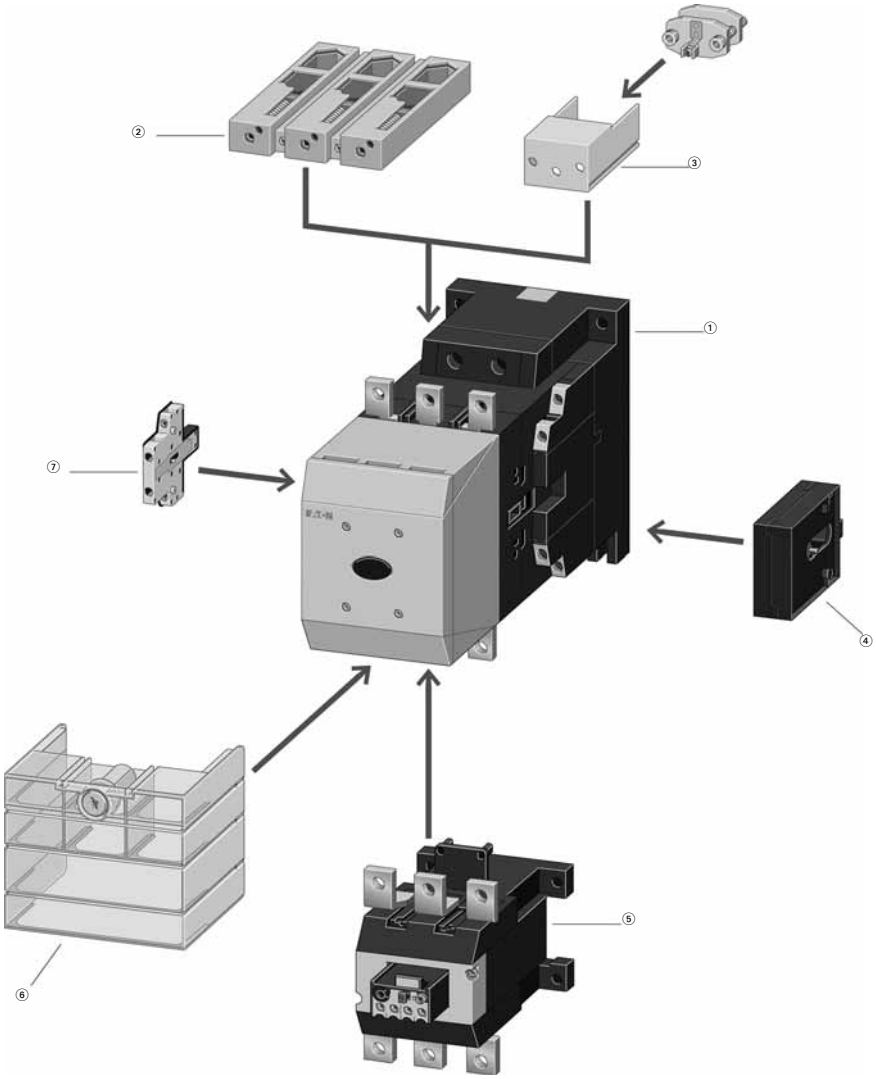
① **Contactor up to 170A AC-3** (see **Page V5-T1-39**)
AC: 12–600V, 50, 60, 50/60 Hz
0.8–1.1 x U_c)
DC: 12–250V
XTCE…B_ (7–15A): 0.8–1.1 x U_c
XTCE…C_–XTCE…G_(18–150A): 0.7–1.2 x U_c
24V: 0.7–1.3 x U_c at 40°C without additional auxiliary contacts
Coils for special voltages
"Safe Isolation" to IEC 536 between coil and contacts

② **Suppressors** (see **Page V5-T1-71**)
RC suppressor
Varistor suppressor
Free-wheel diode suppressor

③ **Overload Relays** (see **Page V5-T1-130**)
Can be mounted directly
Separate mounting, possible
Protection of EEx e-motors

④ **Auxiliary Contact Modules** (see **Page V5-T1-24**)
Two-pole, plug-in type
Four-pole, plug-in type
Overlapping contacts
Two-pole, side-mounting

XTCE185–XTCE20 Contactors



Notes

① **XTCE Contactors for 185–2000A**
(see **Page V5-T1-46**)
Multi-voltage coils:
24–48 Vdc
48–110 Vac/Vdc
110–250 Vac/Vdc
250–500 Vac
0.7–1.15 x U_c
Actuation options:
Directly
From the PLC
With low-consumption contact
XTCS Contactors for 185–570A AC-3
(see **Page V5-T1-42**)
Control voltages:
110–120V 50/60 Hz
220–240V 50/60 Hz
Conventional operation

② **Cable Terminal Block**
(see **Page V5-T1-97**)
One or two conductors per phase
Round and flat conductor connectable
Finger-proof

③ **Flat Strip Conductor Terminals**
(see **Page V5-T1-97**)
One or two strips per phase
Control circuit terminal
Cover for fingerproofing

④ **Mechanical Interlock**
(see **Page V5-T1-73**)
Fits between contactors

⑤ **Overload Relays**
(see **Page V5-T1-130**)
Can be mounted directly
Separate mounting, possible
Protection of EEx e-motors
PTB certificate

⑥ **Terminal Shroud**
(see **Page V5-T1-75**)
Finger-proof

⑦ **Auxiliary Contact Modules**
(see **Page V5-T1-24**)
Two-pole, side-mounting

1

Catalog Number Selection

XT IEC Contactors and Starters

XT CE C 007 B 01 AD P16

Designation
XT = ***XT*** line of IEC control

Type
CE = Three-pole FVNR IEC contactor
CS = Three-pole FVNR S Series IEC contactor
CF = Four-pole FVNR IEC contactor
CR = Three-pole FVR IEC contactor
CC = IEC capacitor contactor
AE = FVNR IEC starter
AS = FVNR S-Series IEC starter
AR = FVR IEC starter

Terminations
Blank = Screw terminals (6–65A); 5 mm (80–150A); no lugs (185–2000A)
C = Spring cage terminals consult local sales office for availability

Coil Codes
See **Page V5-T1-53**.

Built-In Auxiliary Contact
01 = 1NC
10 = 1NO
00 = 0NO–0NC
S1 = 1NO–1NC side-mount auxiliary
11 = 1NO–1NC top-mount auxiliary
22 = 2NO–2NC

Current Ratings, AC-3		
007 = 7A	**080** = 80A	**570** = 570A
009 = 9A	**095** = 95A	**580** = 580A
012 = 12A	**115**= 115A	**650** = 650A
015 = 15A	**150** = 150A	**750** = 750A
018 = 18A	**170** = 170A	**820** = 820A
025 = 25A	**185** = 185A	**C10** = 1000A
032 = 32A	**225** = 225A	**C14** = 1400A, AC-1
040 = 40A	**250** = 250A	**C16** = 1600A, AC-3
050 = 50A	**300** = 300A	**C20** = 2000A, AC-1
065 = 65A	**400** = 400A	
072 = 72A	**500** = 500A	

Frame Size Designation	
B = 45 mm	**L** = 140 mm
C = 45 mm	**M** = 160 mm
D = 55 mm	**N** = 250 mm
F = 90 mm	**P** = 260 mm
G = 90 mm	**R** = 515 mm
H = 140 mm	

XTAE, XTAS and XTAR Starters Only—Maximum Overload Relay

XTOB Maximum Overload Rating

Frame B	**Frame D**
P16 = 0.1–0.16A	**010** = 6–10A
P24 = 0.16–0.24A	**016** = 10–16A
P40 = 0.24–0.4A	**024** = 16–24A
P60 = 0.4–0.6A	**040** = 24–40A
001 = 0.6–1A	**057** = 40–57A
1P6 = 1.0–1.6A	**065** = 50–65A
2P4 = 1.6–2.4A	**075** = 65–75A
004 = 2.4–4A	
006 = 4–6A	**Frame F**
010 = 6–10A	**035** = 25–35A
012 = 9–12A	**050** = 35–50A
016 = 12–16A	**070** = 50–70A
	100 = 70–100A
Frame C	**Frame G**
P16 = 0.1–0.16A	**035** = 25–35A
P24 = 0.16–0.24A	**050** = 35–50A
P40 = 0.24–0.4A	**070** = 50–70A
P60 = 0.4–0.6A	**100** = 70–100A
001 = 0.6–1A	**125** = 95–125A
1P6 = 1.0–1.6A	**150** = 120–150A
2P4 = 1.6–2.4A	**175** = 145–175A
004 = 2.4–4A	
006 = 4–6A	**Frame L**
010 = 6–10A	**070** = 50–70A
016 = 10–16A	**100** = 70–100A
024 = 16–24A	**125** = 95–125A
032 = 24–32A	**160** = 120–160A
	220 = 160–220A
	250 = 200–250A

XTOE Maximum Overload Rating

	Standard Type Suffix	Ground Fault Type Suffix
Frame B		
0.33–1.65A	5E1P6	5G1P6
1–5A	5E005	5G005
4–20A	5E020	5G020
Frame C		
0.33–1.65A	5E1P6	5G1P6
1–5A	5E005	5G005
4–20A	5E020	5G020
9–45A	5E045	5G045
Frame D		
9–45A	5E045	5G045
20–100A	5E100	5G100
Frame F, G		
20–100A	5E100	5G100
Frame G, H		
35–175A	5E175	5G175

Frame H

Three-Pole Contactors, Frame H (Electronic Coil)—UL/CSA Ratings

UL General Purpose Ampere Rating	Three-Phase hp Ratings 200V	240V	480V	600V	Auxiliary Contacts	Catalog Number ①②
250	50	60	125	150	2NO-2NC	**XTCE185H22_**
250	60	75	150	200	2NO-2NC	**XTCE225H22_**

Three-Pole Contactors, Frame H (Electronic Coil)—IEC Ratings

AC-3 I_e (A)	AC-1 (40°C) $I_e = I_{th}$ (A)	Maximum kW Ratings AC-3/Three-Phase Motors 50–60 Hz 220/230V	380/400V	660/690V ③	1000V ③	Auxiliary Contacts	Catalog Number ①②
185	337	55	90	140	108	2NO-2NC	**XTCE185H22_**
225	386	70	110	215	108	2NO-2NC	**XTCE225H22_**

Frame L

Three-Pole Contactors, Frame L—UL/CSA Ratings

UL General Purpose Ampere Rating	Three-Phase hp Ratings 200V	230V	460V	575V	Auxiliary Contacts	Catalog Number ①②
Standard Coil (110/120V, 230/240 Vac Coil Only)						
300	75	100	200	250	2NO-2NC	**XTCS250L22_**
350	100	125	250	300	2NO-2NC	**XTCS300L22_**
Electronic Coil						
300	75	100	200	250	2NO-2NC	**XTCE250L22_**
350	100	125	250	300	2NO-2NC	**XTCE300L22_**

Three-Pole Contactors, Frame L—IEC Ratings

AC-3 I_e (A)	AC-1 (40°C) $I_e = I_{th}$ (A)	Maximum kW Ratings AC-3/Three-Phase Motors 50–60 Hz 220/230V	380/400V	660/690V ③	1000V ③	Auxiliary Contacts	Catalog Number ①②
Standard Coil (110/120V, 230/240 Vac Coil Only)							
250	429	75	132	240	108	2NO-2NC	**XTCS250L22_**
300	490	90	160	195	132	2NO-2NC	**XTCS300L22_**
Electronic Coil							
250	429	75	132	240	108	2NO-2NC	**XTCE250L22_**
300	490	90	160	195	132	2NO-2NC	**XTCE300L22_**

Notes

① Underscore (_) indicates magnet coil suffix required. See **Page V5-T1-53**. Terminals not included. See **Page V5-T1-75** for terminal accessories.

② Does not include lugs.

③ For 185–500A contactors at 660/690V or 1000V: Do not reverse directly.

Starter Application Data ①

Catalog Prefix	AC-3	Electrical Life (Operations)
XTAE012B	12A	1 million
XTAE015B	15A	1.2 million
XTAE018C	18A	2 million

Magnet Coil Suffix

Coil Voltage	Suffix Code
Frames A–B	
110V 50 Hz, 120V 60 Hz	**A**
220V 50 Hz, 240V 60 Hz	**B**
230V 50 Hz	**F**
24V 50/60 Hz	**T**
24 Vdc	**TD**
415V 50 Hz, 480V 60 Hz	**C**
600V 60 Hz	**D**
208V 60 Hz	**E**
190V 50 Hz, 220V 60 Hz	**G**
240V 50 Hz, 277V 60 Hz	**H**
380V 50 Hz, 440V 60 Hz	**L**
400V 50 Hz	**N**
380V 60 Hz	**P**
12V 50/60 Hz	**R**
42V 50 Hz, 48V 60 Hz	**W**
48V 50 Hz	**Y**
120 Vdc	**AD**
220 Vdc	**BD**
12 Vdc	**RD**
48 Vdc	**WD**

Coil Voltage	Suffix Code
Frames C–F	
110V 50 Hz, 120V 60 Hz	**A**
220V 50 Hz, 240V 60 Hz	**B**
230V 50 Hz	**F**
24V 50/60 Hz	**T**
24–27 Vdc	**TD**
415V 50 Hz, 480V 60 Hz	**C**
600V 60 Hz	**D**
208V 60 Hz	**E**
190V 50 Hz, 220V 60 Hz	**G**
240V 50 Hz, 277V 60 Hz	**H**
380V 50 Hz, 440V 60 Hz	**L**
400V 50 Hz	**N**
380V 60 Hz	**P**
12V 50/60 Hz	**R**
42V 50 Hz, 48V 60 Hz	**W**
48V 50 Hz	**Y**
110–130 Vdc	**AD**
200–240 Vdc	**BD**
48–60 Vdc	**WD**

Coil Voltage	Suffix Code
Frame G	
100–120V 50/60 Hz	**A**
190–240V 50/60 Hz	**B**
24V 50/60 Hz	**T**
24–27 Vdc	**TD**
480–500V 50/60 Hz	**C**
380–440V 50/60 Hz	**L**
42–48V 50/60 Hz	**W**
110–130 Vdc	**AD**
200–240 Vdc	**BD**
48–60 Vdc	**WD**
Frame H	
100–120V 50/60 Hz	**A**
190–240V 50/60 Hz	**B**
480–500V 50/60 Hz	**C**
380–440V 50/60 Hz	**L**
24V 50/60Hz	**T**
42–48V 50/60Hz	**W**
110–130 Vdc	**AD**
200–240 Vdc	**BD**
24–27 Vdc	**TD**
48–60 Vdc	**WD**

Coil Voltage	Suffix Code
Frames L–N	
110–250 Vdc 40–60 Hz	**A**
250–500V 40–60 Hz	**C**
48–110 Vdc 40–60 Hz	**Y**
24–48 Vdc	**TD** ②
Frames L–M, S-Series	
110–120V 50/60 Hz	**A**
220–240V 50/60 Hz	**B**
Frames P–R	
230–250 Vdc 50–60 Hz	**B**

Notes

① See **Page V5-T1-111** for electrical life curves.

② Frames L–M only.